

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICANT : Michael D. Kass, et al.

SERIAL NO. : 10/817,413

Confirmation No. : 3188

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TITLE : INTEGRATED SELF-CLEANING WINDOW ASSEMBLY FOR OPTICAL TRANSMISSION IN COMBUSTION ENVIRONMENTS

EXAMINER : Gwendolyn A. Blackwell Rudasil

GROUP : 1775

DOE NO. : S-99,227

Customer No. : 31974

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**AMENDMENT**

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated May 30, 2006, favorable reconsideration of the above-identified application is courteously requested in view of the following amendments and remarks.

## **REMARKS**

Applicants hereby request further examination of the subject application in view of the amendments and remarks presented herein.

In accordance with Paragraph 1 of the Detailed Action, Applicants hereby affirm election for the invention claims of Group I for examination and withdraw claim 63.

### ***Claim Rejections – 35 U.S.C. § 102(b)***

Claims 14-16, 19-24, 44-46, 55-56, and 59-60, are rejected under 35 U.S.C. § 102(b) as being anticipated by **Greenberg et al (U.S. Patent No. 6,054,227)**. Applicant respectfully withdraws these claims.

### ***Claim Rejections – 35 U.S.C. § 102(a)***

Claims 47, 48, and 50 are rejected under 35 U.S.C. § 102(a) as being anticipated by **Athey et al (U.S. Publication no. 2003/0235720)**. Applicant respectfully withdraws these claims.

### ***Claim Objections***

It is submitted that claims 17-18, 25-26, 49, 57-58, and 61-62, as now amended, overcome the Examiner's objection. These claims have been rewritten as per the Examiner's instructions. The objection being overcome, Applicants respectfully request withdrawal of the objection.

**CONCLUSION**

In view of all the above amendments and remarks, it is submitted that the Examiner's rejections and objections are overcome, and that applicants' claims are in condition for allowance. Applicants therefore earnestly solicit allowance of thereof, and the issue of U.S. letters patent therefore.

Respectfully submitted,

/s/ Esther L. Roberts

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Dated: August 18, 2006

**COMPLETE LISTING OF CLAIMS, INCORPORATING AMENDMENTS**  
**IN RESPONSE TO OFFICE ACTION DATED 05/30/2006**  
**FOR SERIAL NO. 10/817,413**

We claim:

1. – 13. (Cancelled)

14. (Withdrawn) A self-cleaning window assembly comprising:

- a) a transparent base layer having an inner and outer surface;
- b) a catalytic material attached to said transparent base layer; and
- c) an oxygen conducting material integral with said transparent base layer.

15. (Withdrawn) The self-cleaning window assembly as set forth in claim 14,

wherein said transparent base layer is selected from a group consisting of: quartz, zirconia, silica, alumina, and titania.

16. (Withdrawn) The self-cleaning window assembly as set forth in claim 14, wherein said transparent base layer is electrically conductive.

17. (Currently amended) The self-cleaning window assembly as set forth in claim 14 – A self-cleaning window assembly comprising:

- a) a transparent base layer having an inner and outer surface;
- b) a catalytic material attached to said transparent base layer, wherein said catalytic material is selected from a group consisting of: gold, silver, platinum or a zeolite; and
- c) an oxygen conducting material integral with said transparent base layer.

18. (Currently amended) The self-cleaning window assembly as set forth in claim 14, 17, wherein said catalytic material is comprised of zeolites.

19. (Withdrawn) A self-cleaning window assembly, comprising:  
a) a transparent base layer having an inner and outer surface;  
b) a means for heating attached to said transparent base layer; and  
c) an oxygen conducting material integral with said transparent base layer.

20. (Withdrawn) The self-cleaning window assembly as set forth in claim 19, wherein said transparent base layer is selected from a group consisting of: quartz, zirconia, silica, alumina, and titania.

21. (Withdrawn) The self-cleaning window assembly as set forth in claim 19, wherein said transparent base layer is electronically conductive.

22. (Withdrawn) A self-cleaning window assembly comprising:  
a) a transparent base layer having an inner and outer surface;  
b) a catalytic material attached to said transparent base layer;  
c) a means for heating attached to said transparent base layer; and  
d) an oxygen conducting material integral with said transparent base.

23. (Withdrawn) The self-cleaning window assembly as set forth in claim 22, wherein said transparent base layer is selected from a group consisting of: quartz, zirconia, silica, alumina, and titania.

24. (Withdrawn) The self-cleaning window assembly as set forth in claim 22, wherein said transparent base layer is electrically conductive.

25. (Currently amended) ~~The self-cleaning window assembly as set forth in claim 22, —A self-cleaning window assembly comprising:~~  
a) a transparent base layer having an inner and outer surface;  
b) a catalytic material attached to said transparent base layer, wherein said catalytic material is selected from a group consisting of gold, silver, platinum or a zeolite;  
c) a means for heating attached to said transparent base layer; and  
d) an oxygen conducting material integral with said transparent base.

26. (Currently amended) The self-cleaning window assembly as set forth in claim ~~22~~, 25 wherein said catalytic material is comprised of zeolites.

27. – 43. (Cancelled)

44. (Withdrawn) A self-cleaning window assembly comprising:

- a) a transparent base layer having an inner and outer surface;
- b) a catalytic/heat transfer material attached to said transparent base layer; and
- c) an oxygen conducting material integral with said transparent base layer.

45. (Withdrawn) The self-cleaning window assembly as set forth in claim 44, wherein said transparent base layer is selected from a group consisting of: quartz, zirconia, silica, alumina, and titania.

46. (Withdrawn) The self-cleaning window assembly as set forth in claim 44, wherein said transparent base layer is electrically conductive.

47. (Withdrawn) The self-cleaning window assembly as set forth in claim 44, wherein said catalytic/heat transfer material is zirconia.

48. (Withdrawn) A self-cleaning window assembly comprising:

- a) a transparent base layer, comprised of an oxygen conducting material, said transparent base layer having an inner and outer surface; and
- b) a catalytic/heat transfer material, such as zirconia, attached to said transparent base layer.

49. (Currently amended) The self-cleaning window assembly as set forth in claim 48, A self-cleaning window assembly comprising:  
a) a transparent base layer, comprised of an oxygen conducting material, said transparent base layer having an inner and outer surface wherein said transparent base layer is selected from a group consisting of: quartz, zirconia, silica, alumina, and titania; and  
b) a catalytic/heat transfer material, such as zirconia, attached to said transparent base layer.

50. (Withdrawn) The self-cleaning window assembly as set forth in claim 48, wherein said transparent base layer is electrically conductive.

51. – 54. (Cancelled)

55. (Withdrawn) A self-cleaning window assembly comprising:  
a) a transparent base layer, comprised of a heat transfer material, said transparent base layer having an inner and outer surface; and  
b) an oxygen conducting material integral with said transparent base layer.

56. (Withdrawn) A self-cleaning window assembly comprising:  
a) a transparent base layer, comprised of a heat transfer material, said transparent base layer having an inner and outer surface;  
b) a catalytic material attached to said transparent base layer; and  
c) an oxygen conducting material integral with said transparent base layer.

57. (Currently amended) The self-cleaning window assembly as set forth in claim 56, A self-cleaning window assembly comprising:

- a) a transparent base layer, comprised of a heat transfer material, said transparent base layer having an inner and outer surface;
- b) a catalytic material attached to said transparent base layer, wherein said catalytic material is selected from a group consisting of: gold, silver, platinum or a zeolite; and
- c) an oxygen conducting material integral with said transparent base layer.

58. (Currently amended) The self-cleaning window assembly as set forth in claim 56, 57 wherein said catalytic material is comprised of zeolites.

59. (Withdrawn) A self-cleaning window assembly comprising a transparent base layer, comprised of a heat transfer material which also conducts oxygen, having an inner and outer surface.

60. (Withdrawn) A self-cleaning window assembly comprising:

- a) a transparent base layer, comprised of a heat transfer material which also conducts oxygen, said transparent base layer having an inner and outer surface; and
- b) a catalytic material integral with said transparent base layer.

61. (Currently amended) The self-cleaning window assembly as set forth in claim 60,—A self-cleaning window assembly comprising:

- a) a transparent base layer, comprised of a heat transfer material which also conducts oxygen, said transparent base layer having an inner and outer surface; and
- b) a catalytic material integral with said transparent base layer, wherein said catalytic material is selected from a group consisting of: gold, silver, platinum or a zeolite.

62. (Currently amended) The self-cleaning window assembly as set forth in claim 60, 61 wherein said catalytic material is comprised of zeolites.

63. (Cancelled)